



# Digital Equity

# Behzad Zamanian Chief Information Officer Washoe County

[bzamanian@washoecounty.gov](mailto:bzamanian@washoecounty.gov)



- **Broadband**

- In telecommunications, broadband is wide bandwidth data transmission which transports multiple signals at a wide range of frequencies and Internet traffic types, that enables messages to be sent simultaneously, used in fast internet connections. The medium can be coaxial cable, optical fiber, wireless Internet (radio), twisted pair or satellite. In the context of Internet access, broadband is used to mean any high-speed Internet access that is always on and faster than dial-up access over traditional analog or traditionally copper phone lines.

- **800MHz Regional Radio System**

- Public safety radio systems (such as those used by police, firefighters and emergency medical technicians) operate in several portions of the 800 MHz band, which consists of spectrum at 806-824 MHz paired with spectrum at 851-869 MHz.

- **Cellular Network**

- Cellular refers to a network technology that facilitates mobile device communication over areas comprised of cells and transceivers, which are also known as base stations or cell sites. In a cellular network, the most widely used mobile transceivers are mobile phones, or cell phones.

# Broadband Types

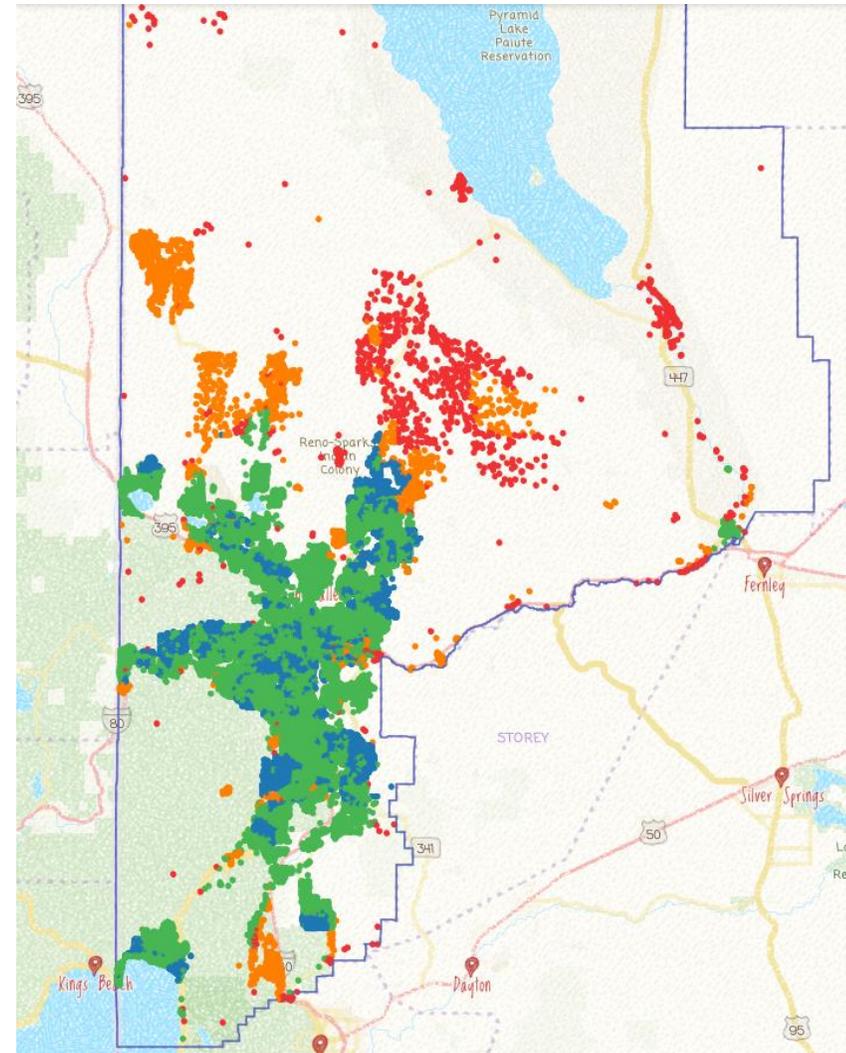


- **Digital Subscriber Line (DSL)**
  - DSL is a wireline transmission technology that transmits data faster over traditional copper telephone lines already installed to homes and businesses. The availability and speed of your DSL service may depend on the distance from your home or business to the closest telephone company facility. Types ADSL, SDSL, HDSL, VDSL
- **Cable Modem**
  - Cable modem service enables cable operators to provide broadband using the same coaxial cables that deliver pictures and sound to your TV set.
- **Fiber**
  - Fiber optic technology converts electrical signals carrying data to light and sends the light through transparent glass fibers about the diameter of a human hair. Fiber transmits data at speeds far exceeding current DSL or cable modem speeds. Telecommunications providers sometimes offer fiber broadband in limited areas and have announced plans to expand their fiber networks and offer bundled voice, Internet access, and video services. Variations of the technology run the fiber all the way to the customer's home or business, to the curb outside, or to a location somewhere between the provider's facilities and the customer.
- **Wireless**
  - Wireless broadband connects a home or business to the Internet using a radio link between the customer's location and the service provider's facility. Wireless broadband can be mobile or fixed. Wireless technologies using longer-range directional equipment provide broadband service in remote or sparsely populated areas where DSL or cable modem service would be costly to provide. Speeds are generally comparable to DSL and cable modem. An external antenna is usually required. Wireless broadband Internet access services offered over fixed networks allow consumers to access the Internet from a fixed point while stationary and often require a direct line-of-sight between the wireless transmitter and receiver. These services have been offered using both licensed spectrum and unlicensed devices. For example, thousands of small Wireless Internet Services Providers (WISPs) provide such wireless broadband at speeds of around one Mbps using unlicensed devices, often in rural areas not served by cable or wireline broadband networks.
- **Satellite**
  - Just as satellites orbiting the earth provide necessary links for telephone and television service, they can also provide links for broadband. Satellite broadband is another form of wireless broadband, and is also useful for serving remote or sparsely populated areas. Downstream and upstream speeds for satellite broadband depend on several factors, including the provider and service package purchased, the consumer's line of sight to the orbiting satellite, and the weather. While new technology offers decent speed, it could be slower than DSL and cable modem. Service can be disrupted in extreme weather conditions.

# WC Connectivity Fabric



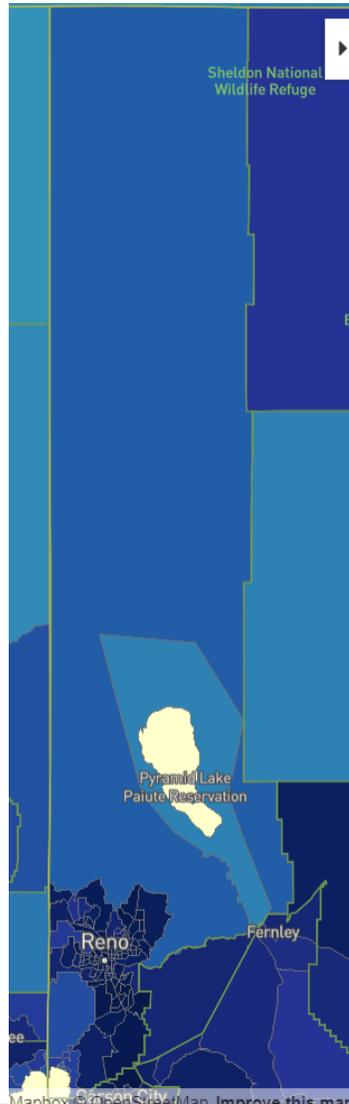
- Orange = Copper / Telephone Line / DSL
- Red = Fixed Wireless
- Green = Cable Modem
- Blue = Fiber



# Broadband Priorities



1. Gerlach
2. North Valleys
3. Warm Springs / Spanish Springs
4. Washoe Valley
5. Downtown Reno
6. Echo Loder School / Yori Park
7. Deer Park
8. Governor's Bowl Park
9. Lake Virginia
10. Reno housing Authority
11. Wooster High School



## All Providers Reporting Service

### Number of Fixed Residential Broadband Providers



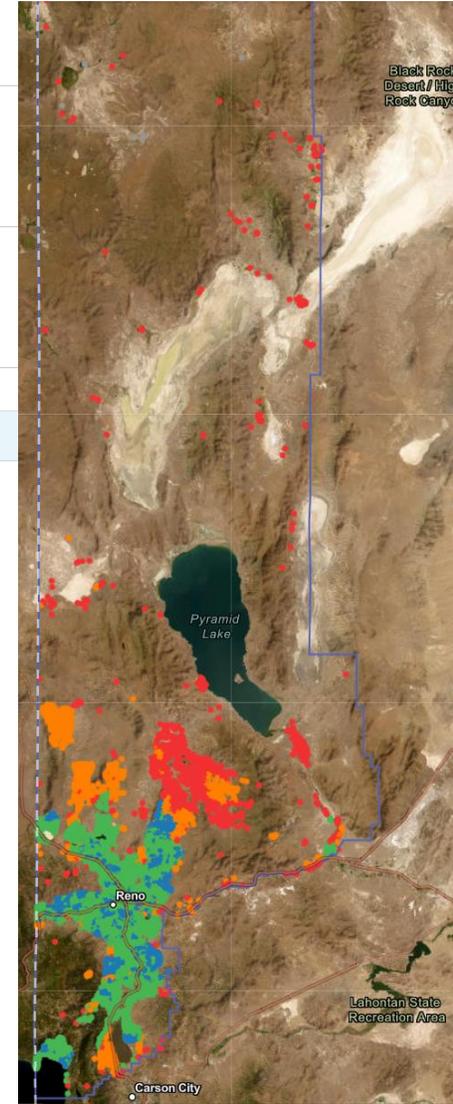
### Broadband

**Technology** ADSL, Cable, Fiber, Fixed Wireless, Satellite, Other

**Speed**  $\geq 25/3$  Mbps

**Date** June 2021 (latest public release)

Please click on the map or search for a location.



# Broadband – Gerlach



## OBJECTIVE:

- To provide high speed Internet access for County facilities in Gerlach and construct technology infrastructure needed to offer reasonably-priced high speed Internet option to Gerlach residents.

## PROPOSED SOLUTION:

- Use PLPT fiber from i-80 to Nixon
- Build 55 miles of aerial fiber from Nixon to Gerlach
- Light up Library, School District, Community Center, and \*other County facilities on the main path\*

## Status April 1, 2023:

- 46/55 miles fiber installed
- Go-live July 2023

## Next Step:

- Apply for BID grant to pull fiber to homes in Gerlach
- Vendor to offer affordable high-speed Internet to the community



# Broadband - Gelach Timeline



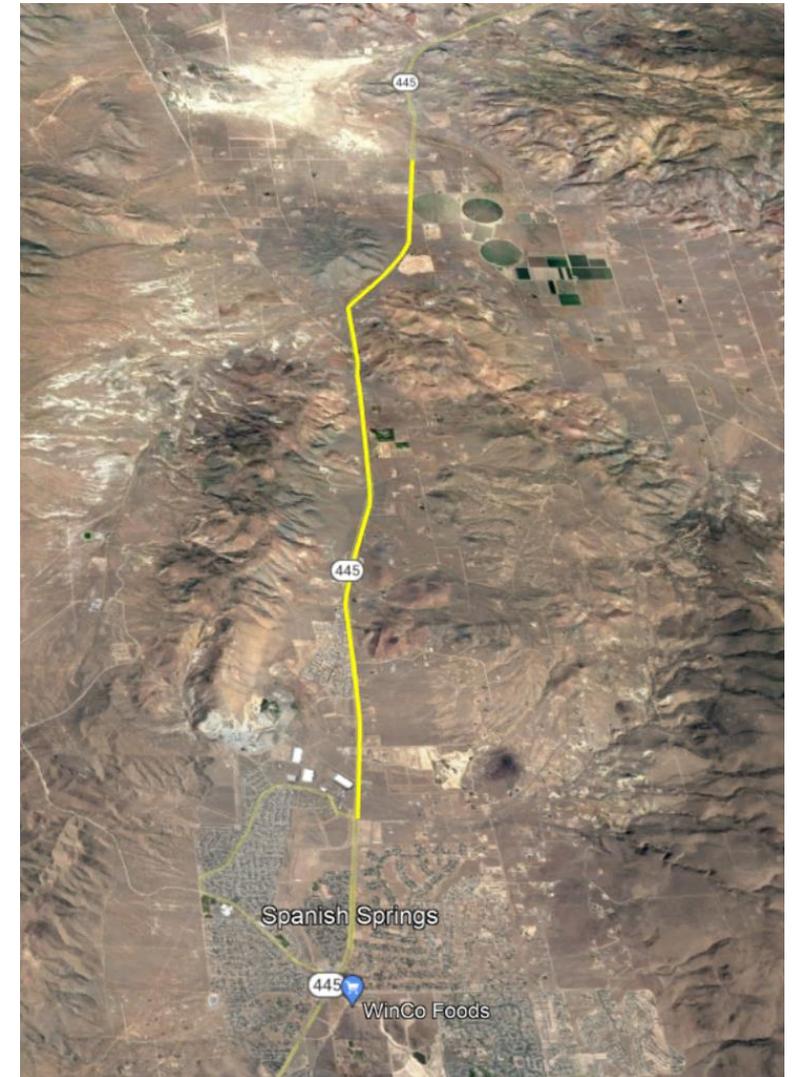
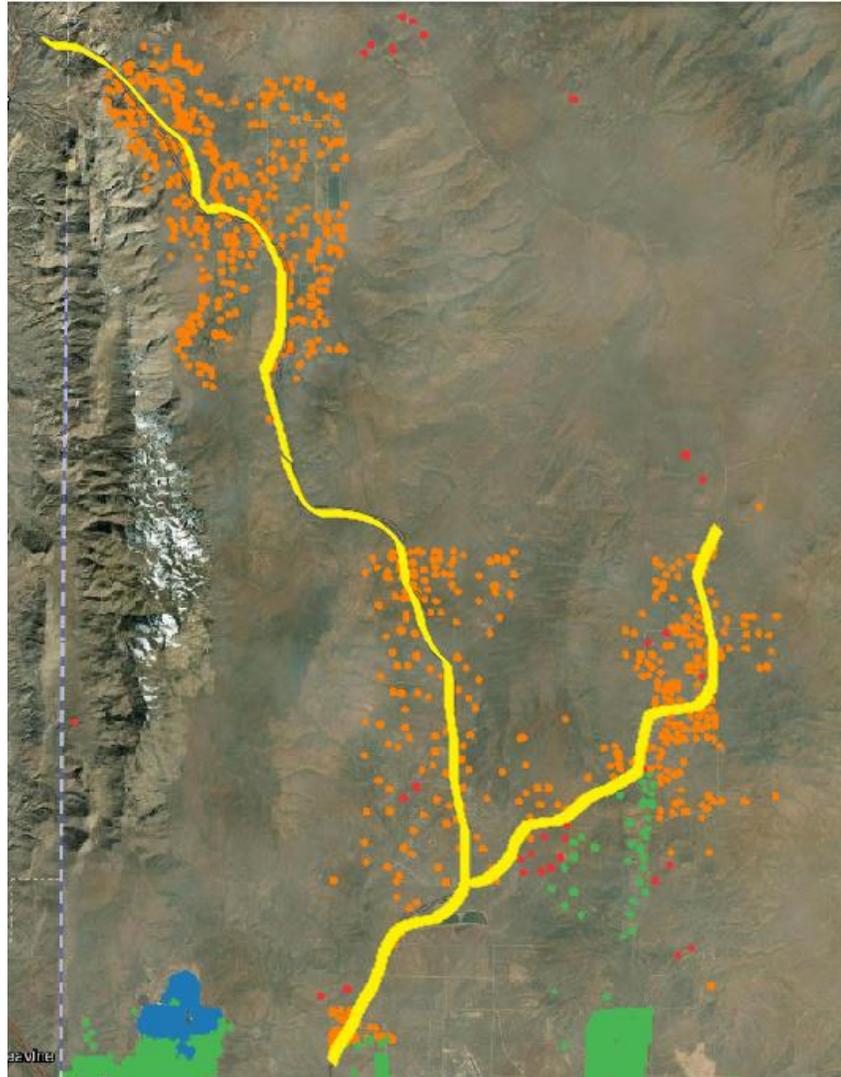
- Developed a working committee – February
- Developed and published RFP - March-April
- Reviewed proposals - April-May
- Awarded RFP to Digital Technology Solutions (DTS) – May
- Established MOU with PLPT on 6/17
- County Approval – June 28, 2022
- Implementation Timeline July 22 – June 23

	Year 1			
	Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4
<b>Contact Award</b>				
<b>Federal / State / Local Permits / Environmental Assessment</b>				
Engineering / Access / Civil / Structural Designs				
Develop and Submit EA Package to State, Federal, and Tribal Authorities				
Acquire Approval				
Tribal/County / City / ADOT ROW Application and Permitting Process				
Acquire ROW's				
<b>Make Ready / New Line Build</b>				
Make Ready Assessment / Remedy any Issues of Existing Line				
<b>Fiber Optic Engineering</b>				
Site Visit				
Engineering Fiber Backbone				
<b>Procurement</b>				
Finalize Fiber Optics Design Documents and Procure Materials				
Material / Delivery				
<b>Outside Plant Construction</b>				
Underground Construction				
Conduit / Fiber Installation				
Aerial / Fiber Installation				
Distribution Line Installation				
<b>Fiber Optic Build-out</b>				
Splicing & Testing				
Splicing of Fibers				
OTDR Testing				
<b>Certification of Project</b>				
Certification by Licensed P.E.				
<b>Project Close Out</b>				

# Broadband - North Valley / Warm Springs



- Red Rock Rd
- Antelope Valley Rd
- Spanish Springs
  
- Local Options
  - RTI
  - Plumas-Sierra
  - AT&T
  - Charter

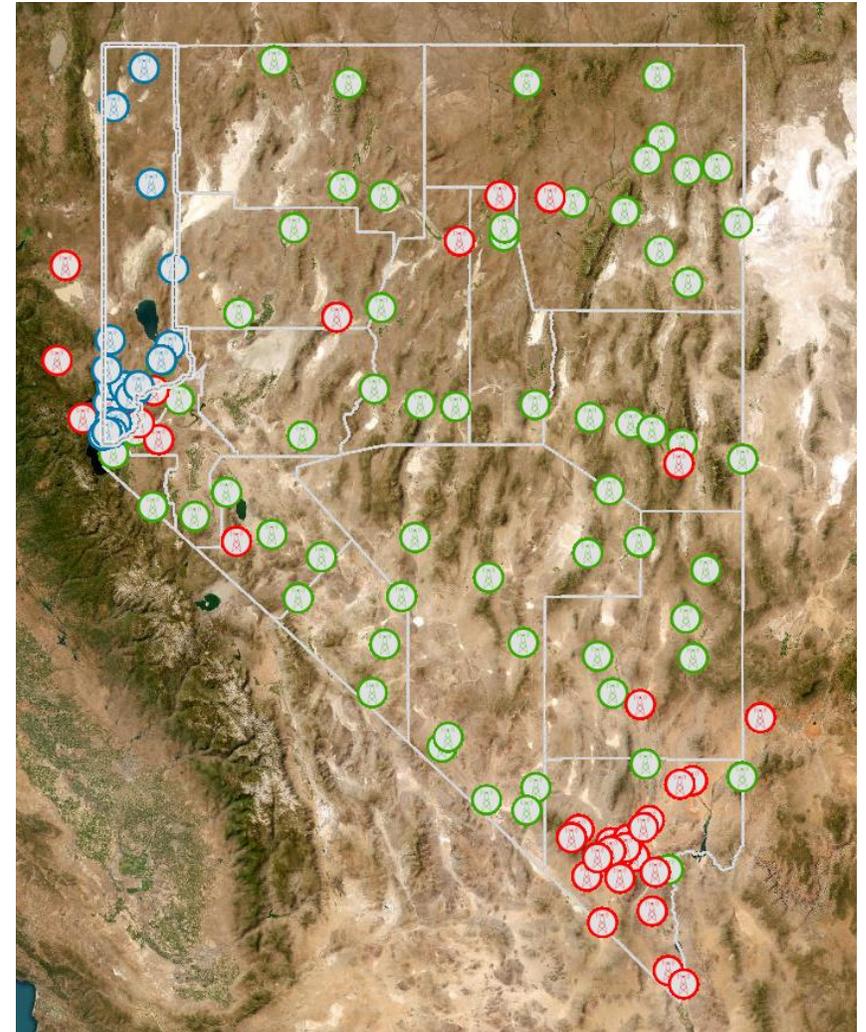
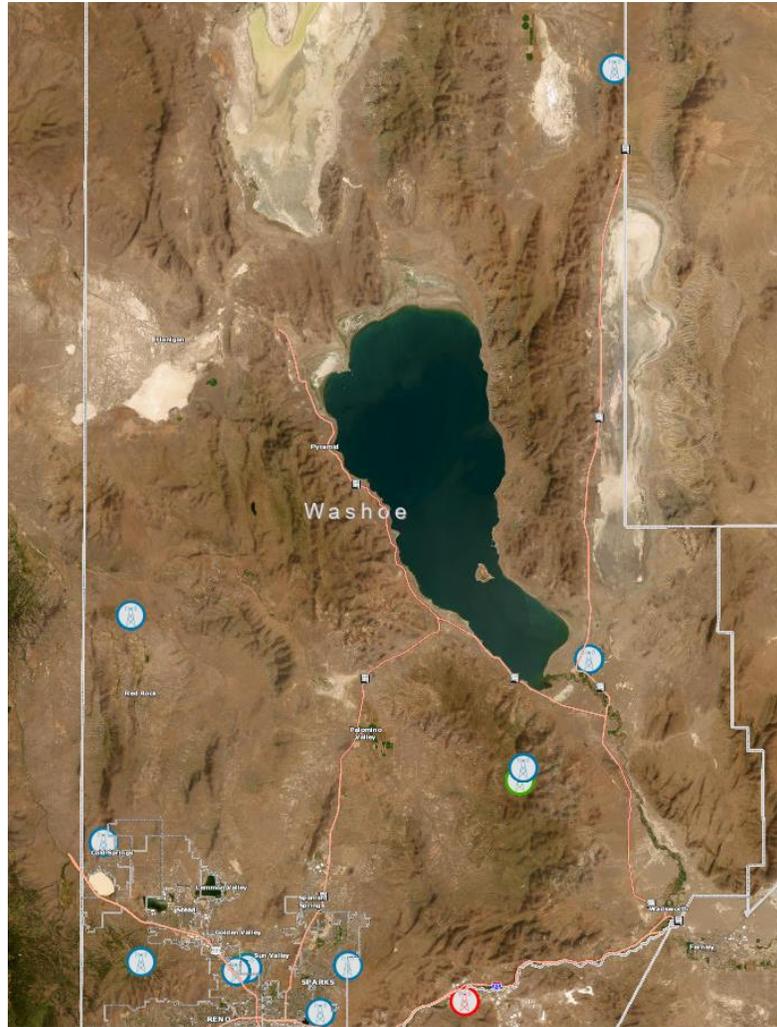


# 800 MHz Radio Sites



## Sites impacting North Valleys & Warm Springs Sites:

- Red Rock
- Virginia Pk.
- Poito
- Smokey Ct.



# Red Rock Radio



This site will provide public safety communication to Fish Spring & Red Rock area

- Architectural detail design completed
- Geotechnical study completed
- Environmental (NEPA) & Archeological report underway
- BLM Registration Completed
- BLM Pending Approval
- Planned construction date: July 2023 - May 2024
- Planned go-live date: July 2025 - May 2026

## Timeline Dependencies:

- BLM Permit process delays
- Budget approval for increased costs

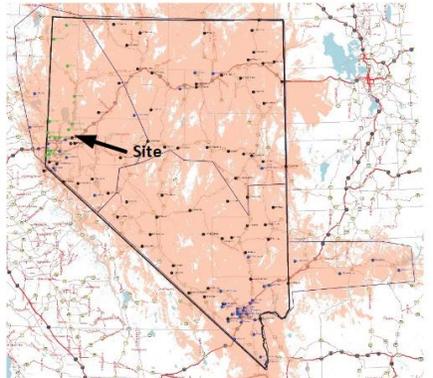
	8	7	6	5	4	3	2	1																						
H																														
G	<p><b>PROJECT: NEVADA SHARED RADIO SYSTEM</b> <b>SITE NAME: RED ROCK</b> <b>CUSTOMER: WASHOE COUNTY</b> <b>SITE TYPE: 4 CHANNEL P25 MULTICAST</b></p>																													
F	<p><b>LATITUDE: 39° 54' 52.70"</b> <b>LONGITUDE: -119° 56' 28.04"</b></p>																													
E	<p><b>ELEVATION (ft): 6001 APPROXIMATE PER RAPTR / TIGERS</b></p>																													
D	<p><b>SITE OWNER: WASHOE COUNTY</b> <b>CONTACT:</b> Melissa Lawney mlawney@washoecounty.us 775-858-5952</p>																													
C	<p><b>FCC LICENSES: SEE FREQUENCY &amp; COMBINER PLAN</b> <b>ASR NUMBER:</b> <span style="border: 1px solid red; padding: 2px;">FCC PENDING TO BE PROVIDED WITH FINAL DOCUMENTATION</span></p>																													
B	<p><b>NOTICE!</b> The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government, Rated: 5E991; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.</p>																													
A	<p>Information and descriptions contained herein are the property of L3Harris Technologies, Inc. Such information and descriptions may not be copied or reproduced by any means or disseminated or distributed without the express prior written permission of L3Harris Technologies, Inc., PSPC Business, 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.</p>								<table border="1"><tr><td colspan="2"><b>L3HARRIS</b> COMMERCIAL AND BUSINESS PUBLIC SAFETY &amp; PROFESSIONAL COMMUNICATIONS</td><td><b>CONFIDENTIAL</b> SECRET 52</td></tr><tr><td colspan="3">PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL</td></tr><tr><td><b>SHEET TITLE:</b> RTRF-SYSTEM</td><td colspan="2"><b>NEVADA SHARED RADIO SYSTEM</b></td></tr><tr><td><b>DATE:</b> 2023-04-26</td><td colspan="2"><b>SITE NAME:</b> RED ROCK</td></tr><tr><td><b>DESIGNED BY:</b> L3HARRIS</td><td colspan="2"><b>TITLE:</b> SHEET-COVER</td></tr><tr><td><b>REV:</b> C</td><td colspan="2"><b>PAGE:</b> 1 OF 1</td></tr><tr><td colspan="3"><small>COPYRIGHT © 2021 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.</small></td></tr></table>	<b>L3HARRIS</b> COMMERCIAL AND BUSINESS PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS		<b>CONFIDENTIAL</b> SECRET 52	PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL			<b>SHEET TITLE:</b> RTRF-SYSTEM	<b>NEVADA SHARED RADIO SYSTEM</b>		<b>DATE:</b> 2023-04-26	<b>SITE NAME:</b> RED ROCK		<b>DESIGNED BY:</b> L3HARRIS	<b>TITLE:</b> SHEET-COVER		<b>REV:</b> C	<b>PAGE:</b> 1 OF 1		<small>COPYRIGHT © 2021 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.</small>		
<b>L3HARRIS</b> COMMERCIAL AND BUSINESS PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS		<b>CONFIDENTIAL</b> SECRET 52																												
PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL																														
<b>SHEET TITLE:</b> RTRF-SYSTEM	<b>NEVADA SHARED RADIO SYSTEM</b>																													
<b>DATE:</b> 2023-04-26	<b>SITE NAME:</b> RED ROCK																													
<b>DESIGNED BY:</b> L3HARRIS	<b>TITLE:</b> SHEET-COVER																													
<b>REV:</b> C	<b>PAGE:</b> 1 OF 1																													
<small>COPYRIGHT © 2021 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.</small>																														
	8	7	6	5	4	3	2	1																						

# Virginia Pk. Radio



This site will provide public safety communication to Warm Springs area

- Architectural detail design completed
- Geotechnical study completed
- Environmental (NEPA) & Archeological report Completed
- BLM Registration Completed
- BLM Permit Completed
- Planned construction date: Completed
- Planned go-live date: Summer 2024
- 100% Done

8		7		6		5		4		3		2		1																																	
NSRS Locations																																															
																																															
<b>PROJECT: NEVADA SHARED RADIO SYSTEM</b> <b>SITE NAME: VIRGINIA PEAK</b> <b>CUSTOMER: WASHOE COUNTY</b> <b>SITE TYPE: 10 CHANNEL P25 SIMULCAST</b>																																															
LATITUDE: 39° 45' 19.68" LONGITUDE: -119° 27' 46.79"																																															
ELEVATION (ft): 8183																																															
<b>SITE OWNER: WASHOE COUNTY</b> Shawn Tayler stayler@washoecounty.us 775-858-5952																																															
<b>FCC LICENSES:</b> <span style="border: 1px solid red; padding: 2px;">FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</span>																																															
<b>ASR NUMBER: NOT REQUIRED</b>																																															
<b>NOTICE:</b> The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government. Rated: 5E991; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.																																															
Information and descriptions contained herein are the property of L3Harris Technologies, Inc. Such information and descriptions may not be copied or reproduced by any means or disseminated or distributed without the express prior written permission of L3Harris Technologies, Inc., PSPC Business, 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.																																															
																																															
<table border="1"><tr><td colspan="2"><b>L3HARRIS</b></td><td>COMMUNICATIONS SYSTEMS</td><td>CONTRACT</td></tr><tr><td colspan="2">Public Safety &amp; Professional Communications</td><td>19CS02712</td><td></td></tr><tr><td colspan="4">PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL</td></tr><tr><td colspan="2">SHEET TITLE: R777-SD01-T-1</td><td colspan="2">NEVADA SHARED RADIO SYSTEM</td></tr><tr><td colspan="2">DATE: 2020-11-02</td><td colspan="2">VIRGINIA PEAK</td></tr><tr><td colspan="2">PREPARED BY: L3HARRIS</td><td colspan="2">TITLE SHEET-COVER</td></tr><tr><td colspan="2">REV: B</td><td colspan="2">PAGE 1 OF 1</td></tr><tr><td colspan="4">COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.</td></tr></table>																<b>L3HARRIS</b>		COMMUNICATIONS SYSTEMS	CONTRACT	Public Safety & Professional Communications		19CS02712		PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL				SHEET TITLE: R777-SD01-T-1		NEVADA SHARED RADIO SYSTEM		DATE: 2020-11-02		VIRGINIA PEAK		PREPARED BY: L3HARRIS		TITLE SHEET-COVER		REV: B		PAGE 1 OF 1		COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.			
<b>L3HARRIS</b>		COMMUNICATIONS SYSTEMS	CONTRACT																																												
Public Safety & Professional Communications		19CS02712																																													
PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL																																															
SHEET TITLE: R777-SD01-T-1		NEVADA SHARED RADIO SYSTEM																																													
DATE: 2020-11-02		VIRGINIA PEAK																																													
PREPARED BY: L3HARRIS		TITLE SHEET-COVER																																													
REV: B		PAGE 1 OF 1																																													
COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.																																															
8		7		6		5		4		3		2		1																																	

# Smokey Ct.



These sites will provide public safety communication to Warm Spring area:

## Smokey Courts

- Architectural detail design completed
- Geotechnical study completed
- Environmental (NEPA) & Archeological report underway
- BLM Registration Completed
- BLM Pending Approval
- Planned construction date: July 2023 - May 2024
- Planned go-live date: July 2025 - May 2026

## Timeline Dependencies:

- BLM Permit process delays
- Budget approval for increased costs

								<p><b>PROJECT: NEVADA SHARED RADIO SYSTEM</b>  <b>SITE NAME: SMOKEY QUARTZ</b>  <b>CUSTOMER: WASHOE COUNTY</b>  <b>SITE TYPE: 12 CHANNEL P25 MULTICAST</b></p> <p>LATITUDE: 39° 35' 09.93"          LONGITUDE: -119° 40' 34.85"</p> <p>ELEVATION (ft): 5138</p>																																																	
<p>SITE OWNER: WASHOE COUNTY</p> <p>CONTACT: Shawn Taylor          stayler@washoecounty.us          775-858-5952</p> <p>FCC LICENSES: <span style="border: 1px solid red; padding: 2px;">FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</span></p> <p>ASR NUMBER: <span style="border: 1px solid red; padding: 2px;">FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</span></p> <p><b>NOTICE!</b></p> <p>The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government. Rated: 5E991; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.</p>								<p>Imagery ©2020 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency</p>																																																	
<p>Information and descriptions contained herein are the property of L3Harris Technologies, Inc. Such information and descriptions may not be copied or reproduced by any means or disseminated or distributed without the express prior written permission of L3Harris Technologies, Inc., P5PC Business, 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.</p>								<table border="1"> <tr> <td colspan="2"> </td> <td colspan="2">                 COMMUNICATIONS SYSTEMS                  PUBLIC SAFETY &amp; PROFESSIONAL COMMUNICATIONS             </td> <td colspan="2">                 CONTRACT                  19C000112             </td> </tr> <tr> <td colspan="6">                 PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL             </td> </tr> <tr> <td colspan="2">                 SHEET TITLE: R777-S117-T-1             </td> <td colspan="4">                 NEVADA SHARED RADIO SYSTEM             </td> </tr> <tr> <td colspan="2">                 DATE: 2020-11-02             </td> <td colspan="4">                 SMOKEY QUARTZ             </td> </tr> <tr> <td colspan="2">                 PREPARED BY: L3HARRIS             </td> <td colspan="4">                 TITLE SHEET COVER             </td> </tr> <tr> <td colspan="2">                 REV:             </td> <td colspan="4">                 PAGE 1 OF 1             </td> </tr> <tr> <td colspan="6">                 COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.             </td> </tr> </table>										COMMUNICATIONS SYSTEMS PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS		CONTRACT 19C000112		PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL						SHEET TITLE: R777-S117-T-1		NEVADA SHARED RADIO SYSTEM				DATE: 2020-11-02		SMOKEY QUARTZ				PREPARED BY: L3HARRIS		TITLE SHEET COVER				REV:		PAGE 1 OF 1				COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.					
		COMMUNICATIONS SYSTEMS PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS		CONTRACT 19C000112																																																					
PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL																																																									
SHEET TITLE: R777-S117-T-1		NEVADA SHARED RADIO SYSTEM																																																							
DATE: 2020-11-02		SMOKEY QUARTZ																																																							
PREPARED BY: L3HARRIS		TITLE SHEET COVER																																																							
REV:		PAGE 1 OF 1																																																							
COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.																																																									

These sites will provide public safety communication to Warm Spring area:

## POITO

- Architectural detail design completed
- Geotechnical study completed
- Environmental (NEPA) & Archeological report underway
- BLM Registration Completed
- BLM Pending Approval
- Planned construction date: Jan 2024 - Dec 2024
- Planned go-live date: July 2026 – June 2027

## Timeline Dependencies:

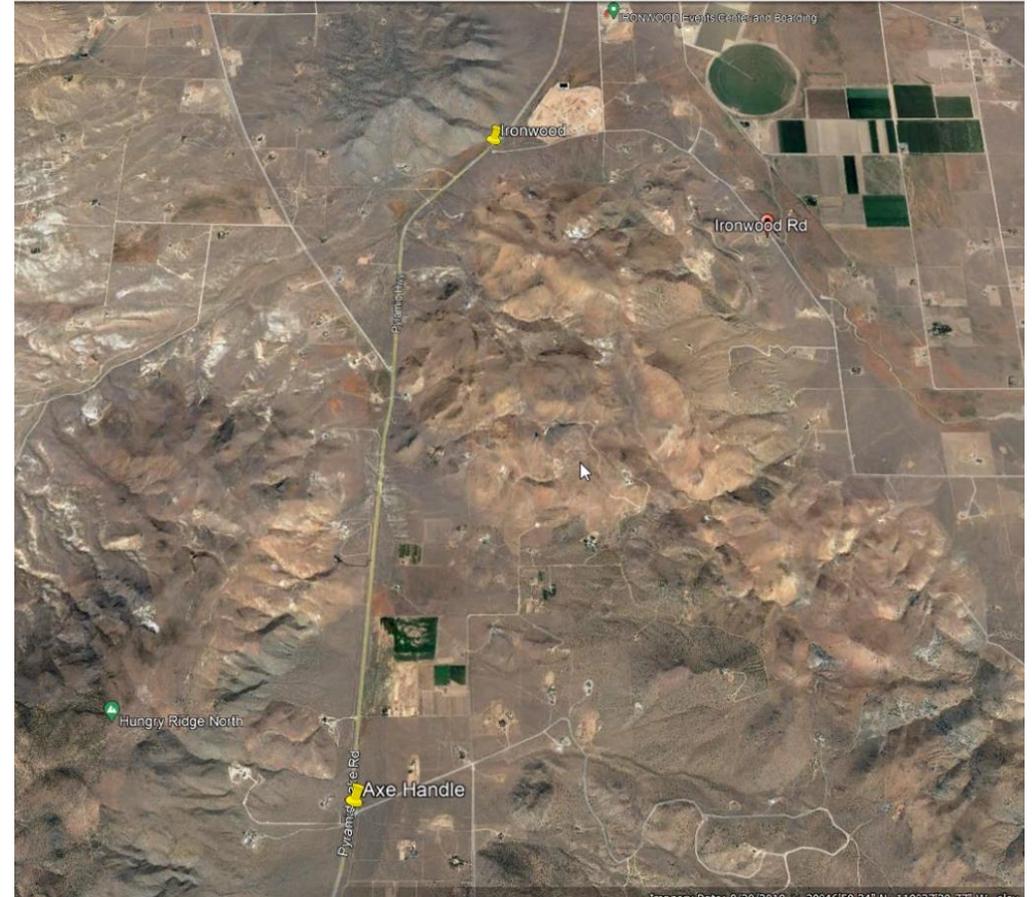
- BLM Permit process delays
- Budget approval for increased costs

	8	7	6	5	4	3	2	1																																											
H																																																			
G	<p><b>PROJECT: NEVADA SHARED RADIO SYSTEM</b>  <b>SITE NAME: POITO</b>  <b>CUSTOMER: WASHOE COUNTY</b>  <b>SITE TYPE: 6 CHANNEL P25 MULTICAST</b>  <b>and NCRN VHF-800</b></p> <p><b>LATITUDE: 40° 25' 33.56"</b>  <b>LONGITUDE: -119° 21' 05.97"</b></p> <p><b>ELEVATION (ft): 5601</b></p>																																																		
F																																																			
E																																																			
D	<p><b>SITE OWNER: HIGH SIERRA</b></p> <p><b>CONTACT:</b> Shawn Tayler stayler@washoecounty.us 775-858-5952</p> <p><b>FCC LICENSES:</b> <span style="border: 1px solid red; padding: 2px;">FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</span></p> <p><b>ASR NUMBER:</b> <span style="border: 1px solid red; padding: 2px;">FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</span></p> <p><b>NOTICE!</b></p> <p>The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government. Rated: 5E991; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.</p>																																																		
C																																																			
B	<p>Information and descriptions contained herein are the property of L3Harris Technologies, Inc. Such information and descriptions may not be copied or reproduced by any means or disseminated or distributed without the express prior written permission of L3Harris Technologies, Inc., PSPC Business, 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.</p>																																																		
A	<table border="1"> <tr> <td colspan="2"> </td> <td colspan="2">                 COMMUNICATIONS SYSTEMS                  PUBLIC SAFETY &amp; PROFESSIONAL COMMUNICATIONS             </td> <td colspan="2">                 CONTRACT                  18CS02712             </td> </tr> <tr> <td colspan="6">                 PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL             </td> </tr> <tr> <td colspan="3">                 SHEET TITLE: R777-0081-T-1             </td> <td colspan="3">                 NEVADA SHARED RADIO SYSTEM             </td> </tr> <tr> <td colspan="3">                 DATE: 2023-11-02             </td> <td colspan="3">                 POITO             </td> </tr> <tr> <td colspan="3">                 PREPARED BY: L3HARRIS             </td> <td colspan="3">                 TITLE SHEET-COVER             </td> </tr> <tr> <td colspan="3">                 REV B             </td> <td colspan="3">                 PAGE 1 OF 1             </td> </tr> <tr> <td colspan="6">                 COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.             </td> </tr> </table>										COMMUNICATIONS SYSTEMS PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS		CONTRACT 18CS02712		PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL						SHEET TITLE: R777-0081-T-1			NEVADA SHARED RADIO SYSTEM			DATE: 2023-11-02			POITO			PREPARED BY: L3HARRIS			TITLE SHEET-COVER			REV B			PAGE 1 OF 1			COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.						
		COMMUNICATIONS SYSTEMS PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS		CONTRACT 18CS02712																																															
PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL																																																			
SHEET TITLE: R777-0081-T-1			NEVADA SHARED RADIO SYSTEM																																																
DATE: 2023-11-02			POITO																																																
PREPARED BY: L3HARRIS			TITLE SHEET-COVER																																																
REV B			PAGE 1 OF 1																																																
COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.																																																			
	8	7	6	5	4	3	2	1																																											

# Cellular Issues (Dead Zone)



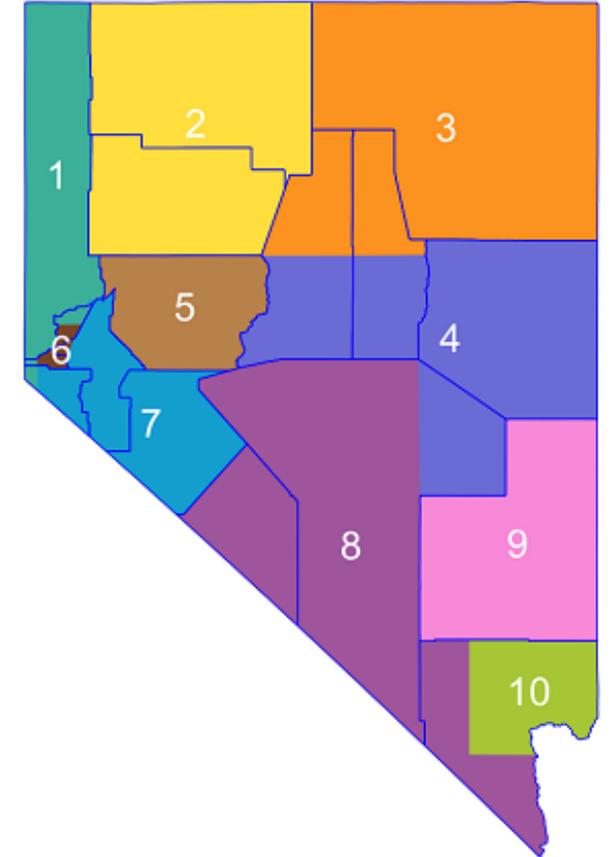
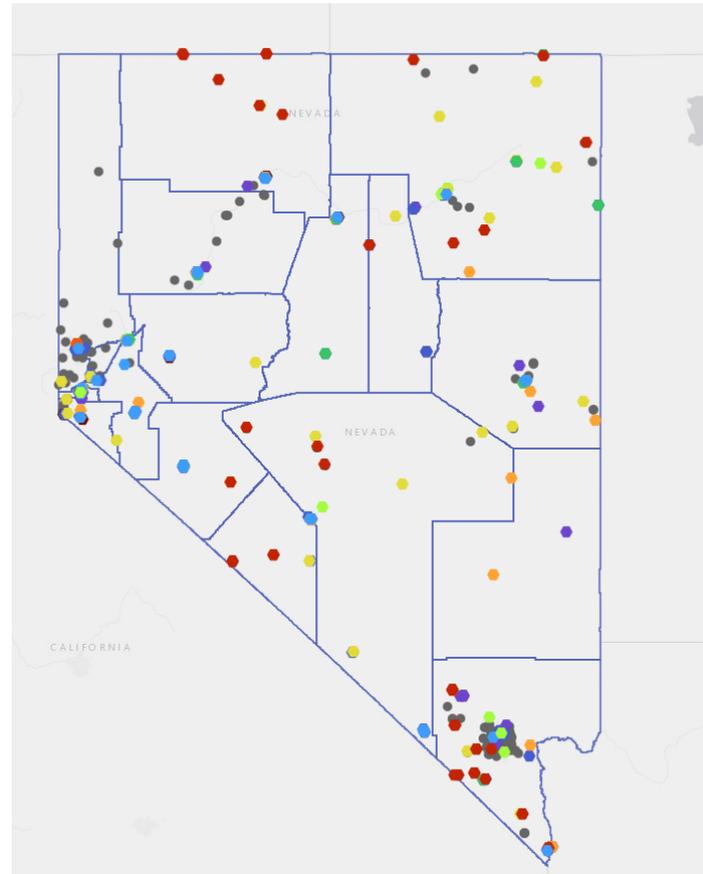
- AT&T
- Verizon
  - Adjustments to existing sites
  - Additional cell site partnership



# High Speed Nevada Initiative (HSNI)



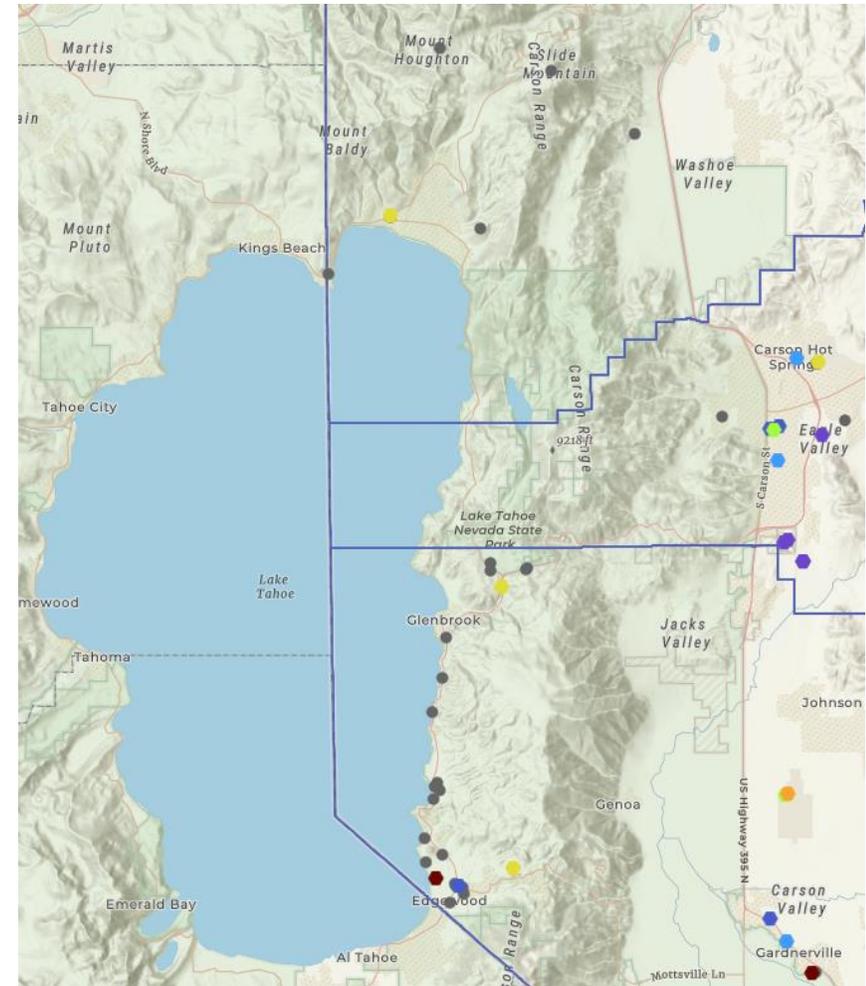
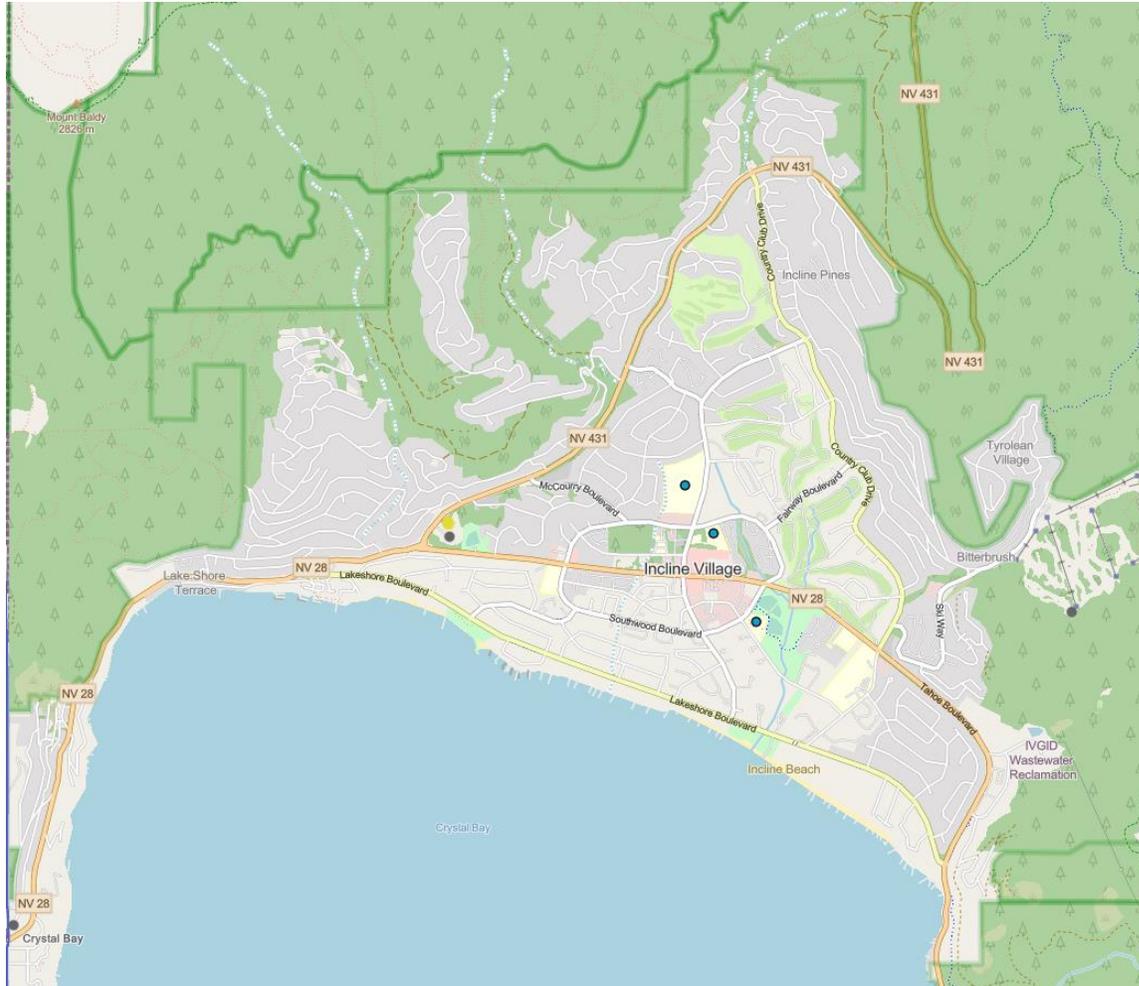
- **High Speed Nevada Initiative Phase I**
- In Phase I of this project OSIT solicited bids from internet service providers to bring fiber based broadband transport services to over 1,000 State and Local Government Facilities, Schools and Libraries, and other community anchor institutions. These 1,000 facilities are located in every county and in nearly every community of the state. OSIT issued RFPs for 10 regions and solicited bids to serve every facility in the region.
- **High Speed NV Initiative Phase II**
- In Phase II of HSNV, OSIT will work with County Broadband Action Teams to identify unserved residential and business locations. Counties will select a service provider partner(s) in a fair, open, and competitive process. The County-provider partnership together will submit a plan to OSIT for last-mile funding. OSIT will not award funding directly to an individual provider. County-provider partnerships will be the only eligible applicants for BEAD and other last-mile funding.



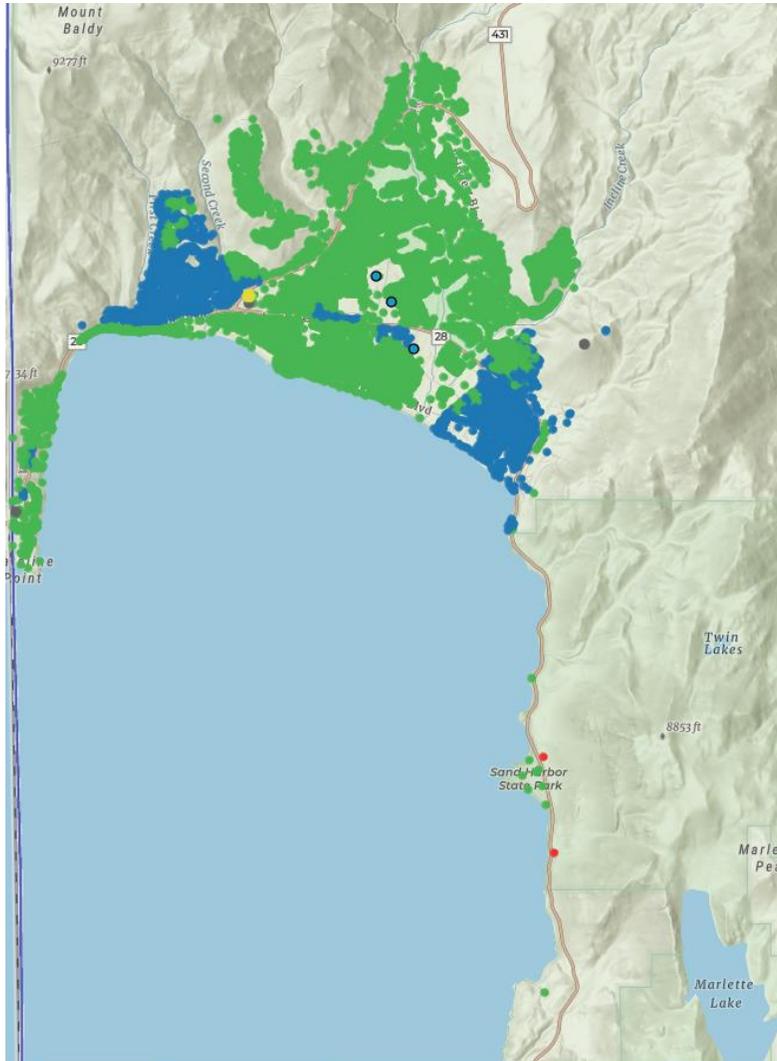
# Region Facilities Impacted



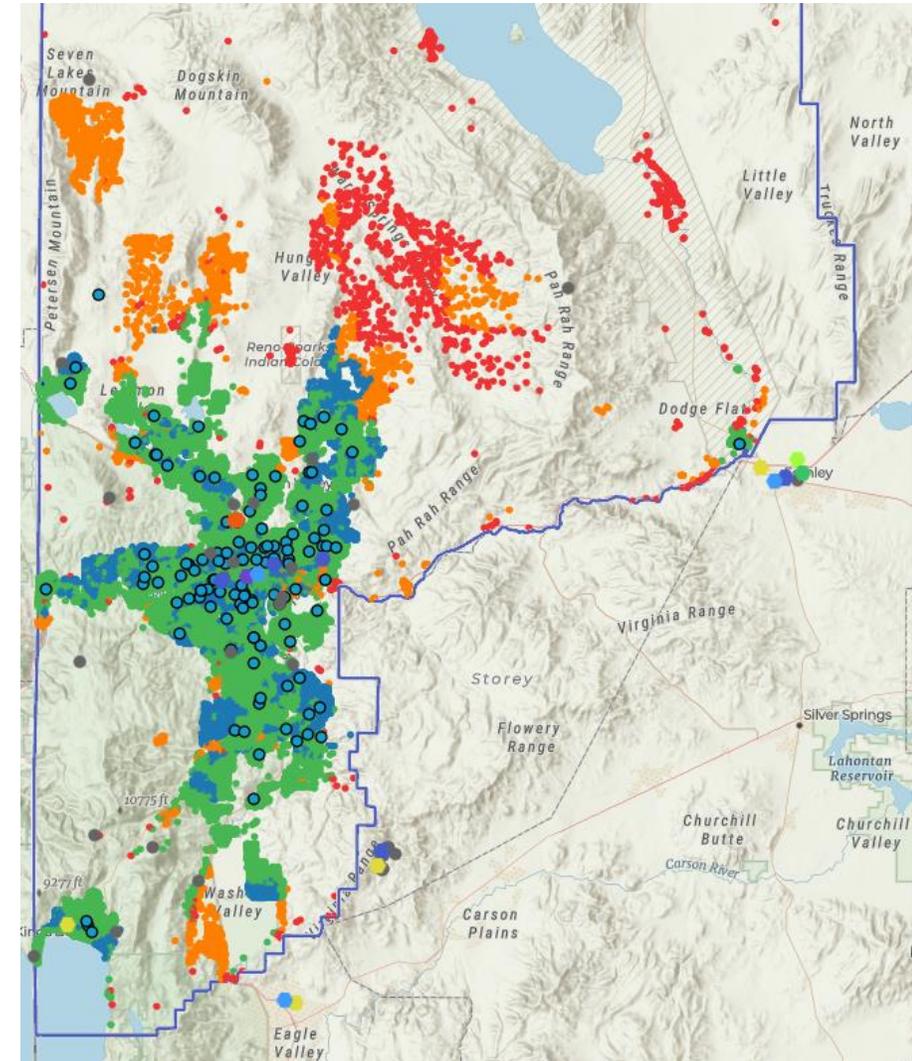
- State facilities
- County facilities



# Community Broadband Fabric



Orange = Copper /  
Telephone Line / DSL  
Red = Fixed Wireless  
Green = Cable  
Modem  
Blue = Fiber



# Incline Coverage FCC Map



Charter is enhancing service at the Lake and specifically in Incline.

## Map Legend

Served Units Percentage

- 0%
- 0 - 20%
- 20 - 40%
- 40 - 60%
- 60 - 80%
- 80 - 100%

# What Can You Do?



- If you aren't using ACP and would qualify, reach out to your ISP
- Research broadband option in your area
  - [Home | FCC National Broadband Map](#)
- Challenge ISP broadband claim
  - [Home | FCC National Broadband Map](#)
- State's website
  - [Broadband \(nv.gov\)](#)
- OSIT broadband map
  - [Nevada Broadband Map \(arcgis.com\)](#)

# Research Broadband Options / Challenges



FCC National Broadband Map

Home | Location Summary | Provider Detail | Area Summary | Data Download | About

473 EAGLE DR INCLINE VILLAGE, NV 89451

Fixed Broadband | Mobile Broadband

**Selected Location**

473 EAGLE DR  
INCLINE VILLAGE, NV 89451 [Location Challenge](#)

Status: **Served** | Residential | Unit Count: 1

**Broadband**

Type: Residential  
Technology: All Wired and Licensed Fixed Wireless  
Speed: 25/3 Mbps or greater  
Data As Of: Jun 30, 2022 (Last Updated: 3/30/23)

Residential | Business [Availability Challenge](#)

Provider	Technology	Down (Mbps)	Up (Mbps)	Chall.
▶ AT&T Inc.	Copper	0.2	0.2	
▶ Charter Communications	Cable	1000	35	
▶ Hughes Network Systems, LLC	GSO Satellite	25	3	
▶ Space Exploration Technologies Corp.	NGSO Satellite	350	40	
▶ T-Mobile USA, Inc.	Licensed Fixed Wireless	0.2	0.2	
▶ Viasat, Inc.	GSO Satellite	50	3	

**Map Legend**

- Coverage available
- Coverage not available
- Not a mass market location

# ISP Broadband Challenge Option



- Go to the FCC Broadband map:
  - [Home | FCC National Broadband Map](#)
- Find your address on the map
- Review ISP claim on the right.
- If it's inaccurate, click on "Location Challenge" link
- Fill out the form and submit

Fixed Broadband | Mobile Broadband

**Selected Location**

**1165 MONTELLO ST**  
RENO, NV 89512

Status: **Served** | Residential | Unit Count: 2

**Broadband**

Type: Residential  
Technology: Any Technology  
Speed: 25/3 Mbps or greater  
Data As Of: Jun 30, 2022 (Last Updated: 3/4/23)

Residential | Business | Availability Challenge

Provider	Technology	Down (Mbps)	Up (Mbps)	Chall.
▶ AT&T Inc.	Fiber to the Premises	1000	1000	
▶ Charter Communications	Cable	1000	35	
▶ Hot Spot Broadband, Inc.	Unlicensed Fixed Wireless	100	50	
▶ Hughes Network Systems, LLC	GSO Satellite	25	3	
▶ Net NV LLC	Unlicensed Fixed Wireless	1000	1000	

Map Legend

**Location Challenge**

1165 MONTELLO ST RENO, NV 89512

Building Type: Residential | Unit Count: 2

All fields required unless marked optional.

**Contact**

Name:

Email:  | Phone Number (optional):

**Challenge Type**

Category:

**Documentation Evidence Supporting the Challenge**

Description: Optional if Supporting Documentation is provided.

Supporting Documentation (optional)  
Click the "Browse" button to select a file (DOC, DOCX, PDF, JPEG, PNG).  
File names can only contain the following characters: a-z A-Z 0-9 | - \_ \* ! ()

# 800 Mhz Radio Upgrade



## Sites impacting Incline Village

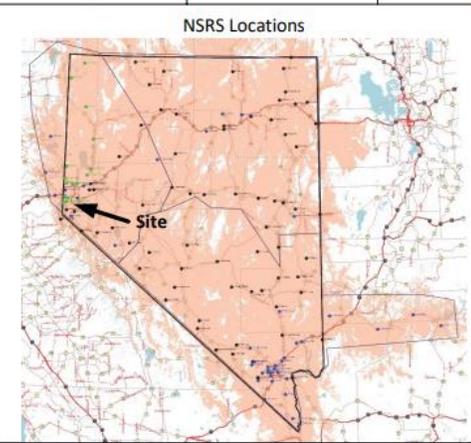
- Radio Sites
- Mt. Rose
- Slide Mtn.
- Snowflake
- Biltmore (Pending ELK decision)
- Incline Dispatch / Sheriff Substation (temp)
- Current schedule: October 2024



# Mt. Rose 800MHz Radio Upgrade



- Mt. Rose:
- All site remediation complete.
- Microwave Backhaul install complete.
- To be Completed:
  - Install racks
  - Install and Ground P25 equipment
  - Connect power
  - Connect alarms
  - Hang antennas
  - Timeline

	8	7	6	5	4	3	2	1	
H									
G	<p><b>PROJECT: NEVADA SHARED RADIO SYSTEM</b> <b>SITE NAME: MT ROSE</b> <b>CUSTOMER: WASHOE COUNTY</b> <b>SITE TYPE: 12 CHANNEL P25 SIMULCAST</b></p>								
F	<p><b>LATITUDE: 39° 19' 22.95"</b> <b>LONGITUDE: -119° 56' 39.22"</b></p>								
E	<p><b>ELEVATION (ft): 10125</b></p>								
D	<p><b>SITE OWNER: HIGH SIERRA</b> <b>CONTACT:</b> Shawn Taylor stayler@washoecounty.us 775-858-5952</p>								
C	<p><b>FCC LICENSES:</b> <span style="border: 1px solid red; padding: 2px;">FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</span></p>								
B	<p><b>ASR NUMBER: NOT REQUIRED</b> <b>NOTICE!</b> The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government. Rated: 5E991; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.</p>								
A	<p>Information and descriptions contained herein are the property of L3Harris Technologies, Inc. Such information and descriptions may not be copied or reproduced by any means or disseminated or distributed without the express prior written permission of L3Harris Technologies, Inc., PSPC Business, 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.</p>								
	8	7	6	5	4	3	2	1	



Google Imagery ©2020 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency

<b>L3HARRIS</b>	COMMUNICATIONS SYSTEMS	CONTRACT 18C502712
PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS		
PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL		
SHEET TITLE: R777-5033-T-1	NEVADA SHARED RADIO SYSTEM	
DATE: 2020-11-20	MT ROSE	
PREPARED BY: L3HARRIS	TITLE SHEET COVER	
REV:	PAGE 1 OF 1	
COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.		

# Snowflake 800MHz Radio Upgrade



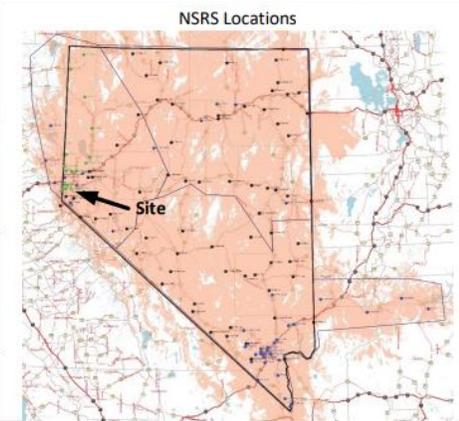
- All site remediation complete
- Microwave Backhaul install complete
- To be completed:
  - Install racks
  - Install and Ground P25 equipment
  - Connect power
  - Connect alarms
  - Hang antennas

8								7								6								5								4								3								2								1							
																<p><b>PROJECT: NEVADA SHARED RADIO SYSTEM</b>  <b>SITE NAME: SNOWFLAKE</b>  <b>CUSTOMER: WASHOE COUNTY</b>  <b>SITE TYPE: 8 CHANNEL P25 SIMULCAST</b></p> <p>LATITUDE: 39° 14' 50.66"                  LONGITUDE: -119° 55' 19.67"</p> <p>ELEVATION (ft): 7458</p>																																															
<p><b>SITE OWNER:</b> TO BE PROVIDED WITH FINAL DOCUMENTATION</p> <p><b>CONTACT:</b> Shawn Taylor stayler@washoecounty.us 775-858-5952</p> <p><b>FCC LICENSES:</b> FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</p> <p><b>ASR NUMBER:</b> FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</p> <p><b>NOTICE!</b></p> <p>The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government. Rated: 5E991; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.</p> <p>Information and descriptions contained herein are the property of L3Harris Technologies, Inc. Such information and descriptions may not be copied or reproduced by any means or disseminated or distributed without the express prior written permission of L3Harris Technologies, Inc., PSC Business, 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.</p>																<p>Google Imagery ©2020 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency</p>																																															
<table border="1"> <tr> <td><b>L3HARRIS</b></td> <td>COMMUNICATIONS SYSTEMS</td> <td>CONTRACT</td> </tr> <tr> <td>PUBLIC SAFETY &amp; PROFESSIONAL COMMUNICATIONS</td> <td></td> <td>19C02712</td> </tr> <tr> <td colspan="3">PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL</td> </tr> <tr> <td>SHEET TITLE: R777-5053-T-1</td> <td colspan="2">NEVADA SHARED RADIO SYSTEM</td> </tr> <tr> <td>DATE: 2020-11-02</td> <td colspan="2">SNOWFLAKE</td> </tr> <tr> <td>PREPARED BY: L3HARRIS</td> <td colspan="2">TITLE SHEET-COVER</td> </tr> <tr> <td>REV: 0</td> <td colspan="2">PAGE 1 OF 1</td> </tr> <tr> <td colspan="3">COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.</td> </tr> </table>																<b>L3HARRIS</b>	COMMUNICATIONS SYSTEMS	CONTRACT	PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS		19C02712	PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL			SHEET TITLE: R777-5053-T-1	NEVADA SHARED RADIO SYSTEM		DATE: 2020-11-02	SNOWFLAKE		PREPARED BY: L3HARRIS	TITLE SHEET-COVER		REV: 0	PAGE 1 OF 1		COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.			A																							
<b>L3HARRIS</b>	COMMUNICATIONS SYSTEMS	CONTRACT																																																													
PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS		19C02712																																																													
PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL																																																															
SHEET TITLE: R777-5053-T-1	NEVADA SHARED RADIO SYSTEM																																																														
DATE: 2020-11-02	SNOWFLAKE																																																														
PREPARED BY: L3HARRIS	TITLE SHEET-COVER																																																														
REV: 0	PAGE 1 OF 1																																																														
COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.																																																															
8								7								6								5								4								3								2								1							

# Slide Mtn. 800MHz Radio Upgrade



- All site remediation complete, exception – new generator install in July or August (when site is accessible).
- Microwave Backhaul install complete.
- To be Completed:
  - Install racks
  - Install and Ground P25 equipment
  - Connect power
  - Connect alarms
  - Hang antennas

		<b>PROJECT: NEVADA SHARED RADIO SYSTEM</b> <b>SITE NAME: SLIDE MTN</b> <b>CUSTOMER: WASHOE COUNTY</b> <b>SITE TYPE: 12 CHANNEL P25 SIMULCAST</b>																									
		<b>LATITUDE: 39° 18' 52.40"</b> <b>LONGITUDE: -119° 53' 03.12"</b>  <b>ELEVATION (ft): 9554</b>																									
<b>SITE OWNER: WASHOE COUNTY</b> <b>CONTACT:</b> Shawn Tayler stayler@washoecounty.us 775-858-5952																											
<b>FCC LICENSES:</b> <span style="border: 1px solid red; padding: 2px;">FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</span>																											
<b>ASR NUMBER: NOT REQUIRED</b>																											
<b>NOTICE!</b> The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government. Rated: 5E991; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.																											
Information and descriptions contained herein are the property of L3Harris Technologies, Inc. Such information and descriptions may not be copied or reproduced by any means or disseminated or distributed without the express prior written permission of L3Harris Technologies, Inc., PSC Business, 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.		<table border="1"><tr><td><b>L3HARRIS</b></td><td>COMMUNICATIONS SYSTEMS</td><td>CONTRACT</td></tr><tr><td>PUBLIC SAFETY &amp; PROFESSIONAL COMMUNICATIONS</td><td>18CS02712</td><td></td></tr><tr><td colspan="3">PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL</td></tr><tr><td>SHEET TITLE: R777-5021-T-1</td><td colspan="2">NEVADA SHARED RADIO SYSTEM</td></tr><tr><td>DATE: 2020-11-09</td><td colspan="2">SLIDE MTN</td></tr><tr><td>PREPARED BY: L3HARRIS</td><td colspan="2">TITLE SHEET-COVER</td></tr><tr><td>REV B</td><td colspan="2">PAGE 1 OF 1</td></tr><tr><td colspan="3">COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.</td></tr></table>		<b>L3HARRIS</b>	COMMUNICATIONS SYSTEMS	CONTRACT	PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS	18CS02712		PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL			SHEET TITLE: R777-5021-T-1	NEVADA SHARED RADIO SYSTEM		DATE: 2020-11-09	SLIDE MTN		PREPARED BY: L3HARRIS	TITLE SHEET-COVER		REV B	PAGE 1 OF 1		COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.		
<b>L3HARRIS</b>	COMMUNICATIONS SYSTEMS	CONTRACT																									
PUBLIC SAFETY & PROFESSIONAL COMMUNICATIONS	18CS02712																										
PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL																											
SHEET TITLE: R777-5021-T-1	NEVADA SHARED RADIO SYSTEM																										
DATE: 2020-11-09	SLIDE MTN																										
PREPARED BY: L3HARRIS	TITLE SHEET-COVER																										
REV B	PAGE 1 OF 1																										
COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.																											

# Biltmore 800MHz Radio Upgrade



- Biltmore on hold because of the property ownership change. Ideally, at Biltmore, we're able to stay at the same location and only build a shelter for radio equipment.
- We're planning to use a temporary P25 site at the Sherriff's substation on Hwy 431 until the Biltmore situation is resolved.

	8	7	6	5	4	3	2	1																						
H									H																					
G	<p><b>PROJECT: NEVADA SHARED RADIO SYSTEM</b>  <b>SITE NAME: BILTMORE</b>  <b>CUSTOMER: WASHOE COUNTY</b>  <b>SITE TYPE: 8 CHANNEL P25 SIMULCAST</b></p>								G																					
F	<p><b>LATITUDE: 39° 13' 46.49"</b>  <b>LONGITUDE: -120° 00' 19.83"</b></p>								F																					
E	<p><b>ELEVATION (ft): 6549</b></p>								E																					
D	<p><b>SITE OWNER: Incline Village G.I.D.</b>  <b>CONTACT:</b> Shawn Taylor          stayler@washoecounty.us          775-858-5952</p>								D																					
C	<p><b>FCC LICENSES:</b> <span style="border: 1px solid red; padding: 2px;">FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</span></p>								C																					
B	<p><b>ASR NUMBER:</b> <span style="border: 1px solid red; padding: 2px;">FCC PENDING. TO BE PROVIDED WITH FINAL DOCUMENTATION</span></p>								B																					
A	<p><b>NOTICE!</b></p> <p>The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government. Rated: 5E991; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.</p> <p>Information and descriptions contained herein are the property of L3Harris Technologies, Inc. Such information and descriptions may not be copied or reproduced by any means or disseminated or distributed without the express prior written permission of L3Harris Technologies, Inc., PSPC Business, 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.</p>								A																					
	8	7	6	5	4	3	2	1																						
	<table border="1"> <tr> <td colspan="2"> <b>L3HARRIS</b>  <small>COMMUNICATIONS SYSTEMS</small>  <small>PUBLIC SAFETY &amp; PROFESSIONAL COMMUNICATIONS</small> </td> <td> <small>CONTRACT</small>  <small>18C802712</small> </td> </tr> <tr> <td colspan="3"> <small>PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL</small> </td> </tr> <tr> <td> <small>SHEET TITLE</small> R277-S051-T-1         </td> <td colspan="2"> <small>NEVADA SHARED RADIO SYSTEM</small> </td> </tr> <tr> <td> <small>DATE</small> 2024-11-29         </td> <td colspan="2"> <small>BILTMORE</small> </td> </tr> <tr> <td> <small>PREPARED BY</small> L3HARRIS         </td> <td colspan="2"> <small>TITLE SHEET-COVER</small> </td> </tr> <tr> <td> <small>REV</small> B         </td> <td colspan="2"> <small>PAGE 1 OF 1</small> </td> </tr> <tr> <td colspan="3"> <small>COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.</small> </td> </tr> </table>								<b>L3HARRIS</b> <small>COMMUNICATIONS SYSTEMS</small> <small>PUBLIC SAFETY &amp; PROFESSIONAL COMMUNICATIONS</small>		<small>CONTRACT</small> <small>18C802712</small>	<small>PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL</small>			<small>SHEET TITLE</small> R277-S051-T-1	<small>NEVADA SHARED RADIO SYSTEM</small>		<small>DATE</small> 2024-11-29	<small>BILTMORE</small>		<small>PREPARED BY</small> L3HARRIS	<small>TITLE SHEET-COVER</small>		<small>REV</small> B	<small>PAGE 1 OF 1</small>		<small>COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.</small>			
<b>L3HARRIS</b> <small>COMMUNICATIONS SYSTEMS</small> <small>PUBLIC SAFETY &amp; PROFESSIONAL COMMUNICATIONS</small>		<small>CONTRACT</small> <small>18C802712</small>																												
<small>PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL</small>																														
<small>SHEET TITLE</small> R277-S051-T-1	<small>NEVADA SHARED RADIO SYSTEM</small>																													
<small>DATE</small> 2024-11-29	<small>BILTMORE</small>																													
<small>PREPARED BY</small> L3HARRIS	<small>TITLE SHEET-COVER</small>																													
<small>REV</small> B	<small>PAGE 1 OF 1</small>																													
<small>COPYRIGHT © 2020 L3HARRIS TECHNOLOGIES. ALL RIGHTS RESERVED.</small>																														

- Radio:
  - Push BLM for permit process start
  - Address budget needs for Radio funds in FY 23-24
- Broadband:
  - Work with the State OSIT regarding WC facilities
  - Identify vendors for partnership opportunities for community broadband in North Valleys & Spanish Springs
  - Community broadband grant opportunities
  - Partnership opportunities with businesses and agencies
- Cellular:
  - Identify dead spots
  - Push providers for additional cell sites
- Digital Equity Program / Website
  - Access to affordable, high-speed internet
  - Access to affordable technology requirements
  - Access to relevant and high quality, effective training and support for digital skill development and use

# Thank you

Questions?

Behzad Zamanian  
bzamanian@washoecounty.gov

